WHAT IS CLAIMED IS:

1. A process for modifying the surface of an organofunctional substrate comprising

reacting an organofunctional group of a silicon compound A with the surface of an organofunctional substrate to form a polar treated surface, wherein the silicon compound A comprises at least one organofunctional group and at least one chloro, alkoxy, carboxy or hydroxyl group, and further wherein said silicon compound A may react to form a polymer bearing silyl groups,

then

applying to the polar treated surface an organofunctional silicon compound B, wherein the silicon compounds A and B may be identical or different, the silicon compound B bears at least one chloro, alkoxy, carboxy or hydroxyl group, and the silicon compound B reacts with the polar treated surface.

2. The process as claimed in claim 1, wherein the silicon compound A is crosslinked with itself.

3. The process as claimed in claim 2, wherein the silicon compound A is crosslinked by UV irradiation.

4. The process as claimed in claim 1, wherein the organofunctional group of the silicon compound A is a linear, branched or cyclic alkyl group having from 1 to 20 carbon atoms and may optionally be substituted with a halogen or an alkenyl group having from 2 to 16 carbon atoms.

5. The process as claimed in claim 1, wherein the organofunctional group of silicon compound A is reacted with the surface of the organofunctional substrate by the addition of an acid or base, in the presence of a solvent, in the presence of a free radical generator or combinations thereof.

6. The process as claimed in claim 4, wherein the acid or base is selected from the group consisting of HCl, HNO_3, HCOOH, CH_3COOH, H_3PO_4, H_2SO_4, an amine, Na_2CO_3,

NaOH, NH_4Cl, CH_3COONa, and CH_3COONH_4.

7. The process as claimed in claim 4, wherein said free radical generator is selected from the group consisting of di-tert-butyl peroxide, dicumyl peroxide, or di-benzoyl peroxide.

8. The process as claimed in claim 1, wherein a method used to apply the silicon compound B is selected from the group consisting of spraying, dipping, drenching, brushing, polishing, rolling, doctoring, CVD, and PVD.

9. The process as claimed in claim 1, further comprising heat treating the organofunctional substrate after reacting the organofunctional group of the silicon compound A with the surface of the organofunctional substrate, after applying the organofunctional silicon compound B to the polar treated surface or both.

10. The process as claimed in claim 5, wherein the organofunctional is heat treated from 80 to 120°C for from 0.5 to 2 hours after reacting the organofunctional group of the silicon compound A with the surface of the organofunctional substrate.

11. The process as claimed in claim 5, wherein the organofunctional substrate is heated from 100 to 200°C for from 0.5 to 2 hours after applying the organofunctional silicon compound B to the polar treated surface.

12. The process as claimed in claim 1, further comprising precleaning the organofunctional substrate by treating said organofunctional substrate with at least one acidic aqueous solution, basic aqueous solution, acid alcoholic solution or basic alcoholic solution.

13. The process as claimed in claim 1, wherein one or both of the silicon compounds A and B is an organosilane of the general formula I

$$R^1_xR^2_ySiZ_{(4-x-y)} \qquad (I),$$

wherein the groups R^1 and R^2 are identical or different, and each is a linear, branched, or cyclic alkyl group having from 1 to 20 carbon atoms, or a ω-chloroalkyl, ω-

bromoalkyl, ω-iodoalkyl, ω-azidoalkyl, ω-cyanoalkyl, ω-cyanatoalkyl, ω-isocyanatoalkyl, fluoroalkyl, perfluoroalkyl, alkenyl, aryl, ω-acryloxyalkyl, ω-methacryloxy alkyl, sulfane, ω-mercaptoalkyl, sulfoxyalkyl, ω-thiocyanatoalkyl, ω-glycidyloxyalkyl, epoxy alkyl, alkenyloxyalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, carbonatoalkyl or a ureidoalkyl group, where each alkylene group contains from 1 to 6 carbon atoms, Z is a chloro, a methoxy, ethoxy, isopropoxy, 2-methoxyethoxy or acetoxy group, and x is 1, 2, or 3, and y is 0, 1, or 2, and $(x+y) \leq 3$, or an organosiloxane based on at least one organosilane of the general formula I, or a mixture of said organofunctional silicon compounds.

14. The process as claimed in claim 1, wherein one or both of silicon compounds A and B is present in monomeric, oligomeric, cocondensed, dissolved, emulsified, or suspended form.

15. The process as claimed in claim 1, wherein the organofunctional substrate comprises a plastic, a composition or a natural substance.

16. The process as claimed in claim 1, wherein the organofunctional substrate is selected from the group consisting of polyethylene, polypropylene, polyamide, polyester, polyacrylate, polyurethane, polystyrene, polycarbonate, polyvinyl chloride, polyethylene terephthalate, silicone, melamine resin, carbon fiber, furan resin, alkyd resin, bismaleimidetriazine resin, ethylene-vinyl acetate copolymer, acrylonitrile-butadiene-styrene copolymer, wood and rubber.

17. A surface-modified substrate produced by the process as claimed in claim 1.

18. A product comprising a surface-modified substrate produced by the process as claimed in claim 1.

19. A process for repelling water, oil, dirt, dust or paint comprising incorporating a substrate obtained by the process as claimed in claim 1 as a coating on an article.